

# PRODUCT INFORMATION



## Trichostatin A

Item No. 89730

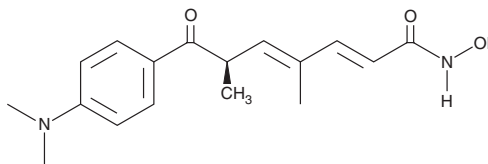
**CAS Registry No.:** 58880-19-6  
**Formal Name:** 7-[4-(dimethylamino)phenyl]-N-hydroxy-4,6R-dimethyl-7-oxo-2E,4E-heptadienamide

**Synonym:** TSA  
**MF:** C<sub>17</sub>H<sub>22</sub>N<sub>2</sub>O<sub>3</sub>  
**FW:** 302.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 265, 340 nm

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



### Laboratory Procedures

Trichostatin A (TSA) is supplied as a crystalline solid. A stock solution may be made by dissolving the TSA in the solvent of choice. TSA is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of TSA in these solvents is approximately 20 and 30 mg/ml, respectively.

TSA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, TSA should be directly dissolved in 0.1 M HCl (1.3 mg/ml) and then neutralized with PBS (pH 7.2) to achieve the desired concentration or pH. Approximately 0.7 ml of PBS (pH 7.2) is required to neutralize 1 ml of the acidic solution. We do not recommend storing the aqueous solution for more than one day.

### Description

Trichostatin A is a potent, reversible inhibitor of class I, II, and IV histone deacetylases (HDACs). In human Jurkat T cells, trichostatin A arrests cell cycle progression in G<sub>1</sub> and inhibits the activity of HDAC1 with an IC<sub>50</sub> value of 70 nM.<sup>1</sup> Trichostatin A selectively inhibits the removal of acetyl groups from the amino-terminal lysine residues of core histones, which modulates the access of transcription factors to the underlying genomic DNA.<sup>2</sup>

### References

1. Hoshikawa, Y., Kwon, H.J., Yoshida, M., *et al.* Trichostatin A induces morphological changes and gelsolin expression by inhibiting histone deacetylase in human carcinoma cell lines. *Exp Cell Res.* **214**, 189-97 (1994).
2. Taunton, J., Hassig, C.A., and Schreiber, S.L. A mammalian histone deacetylase related to the yeast transcriptional regulator Rpd3p. *Science* **272**, 408-411 (1996).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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